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globe of crystal, in which is contained a jet of illuminating gas: the tinge of the crystal resembles that of the nebulous ring.)

"11*th January*, 1856. The two ansæ of the ring C are of different shades. This, on the side of the shadow, is blue; the other, reddish. The eye-pieces are achromatic, and have been changed expressly for that purpose."

On a new Variable Star. By J. R. Hind, Esq.

"On the evening of December 15th, 1855, I remarked in R.A. (1856) $7^h\ 46^m\ 33^s{\cdot}65$, N.P.D. $67^\circ\ 37'\ 17''{\cdot}1$, an object shining as a star of the ninth magnitude, with a very blue planetary light, which I have never seen before during the five years that my attention has been directed to this quarter of the heavens. On the next fine night, Dec. 18, it was certainly fainter than on the 15th by half a magnitude or more. Since that date I have not had an opportunity of examining it till last evening, January 10th, when its brightness was not greater than that of stars of the twelfth magnitude. It is evidently a variable star of a very interesting description, inasmuch as the minimum brightness appears to extend over a great part of the whole period, contrary to what happens with *Algol* and *S Cancri.*

"The position given above was deduced by micrometrical comparisons with the principal component of the double star Σ 1158. The *variable* precedes $1^m\ 26^s{\cdot}53$, and is N. $7'\ 30''{\cdot}8$.

"*Mr. Bishop's Observatory*, 1856, *January* 11."

On the Occultations of the Star Antares (α Scorpii) in the Year 1856. By G. B. Airy, Esq., Astronomer Royal.

"In the year 1856 there will be several occultations of *Antares* by the moon visible in England, namely, on March 26, June 16, and August 10.

"It appears desirable that advantage should be taken of these phenomena for observation of the double character of the star.

"*Antares* is the only close double star of the first magnitude. Its duplicity was discovered, so far as I am aware, by Professor Mitchell, of Cincinnati, on the 13th of June, 1846,* with the large Munich telescope, mounted equatoreally in the Observatory there.

"After the double character of the star had been discovered by direct observation, it was remembered that, in the accounts of observed occultations of *Antares* by the moon, it had been remarked that the light of the star did not disappear or reappear entirely at one instant, but at two instants, with such a sudden change or *saltus* in the character of the light as made it probable that the small companion was seen for a time, while the large star was hidden by the moon.

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* Silliman's *American Journal* (New Series), vol. i. p. 315.

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"The small elevation of *Antares*, even when on the meridian, and the consequent confusion of image, make it impossible for us to see it as a double star in these latitudes. But the sudden change in the intensity of its light at occultation may probably be observed; and a careful register of the times of change of brightness and total disappearance, or of first reappearance and full brilliancy, will give elements for a computation of the relative position and distance of the two stars.

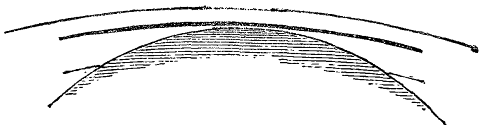
"*Royal Observatory*, 1856, *January* 1."

Observations of the Planet Saturn. By William Lassell, Esq.

"1855, *Nov. 27th.* 10^h 30^m G.M.T. Viewed *Saturn* with powers 430 and 565. Sky hazy, with hoar-frost. Planet continually disturbed by passing haze, and observation very tantalising. The shadow of the ball is seen all along the southern limb, extending into the division of the ring, and is lost in it. The ball evidently does not itself extend up to the division of the ring. The shadow seems quite flat-topped, conveying the idea that its presumed roundness is lost in the division; and if the extreme south limb of the shadow does really extend over the division, it is so faint as not to be distinguishable on the darker ring A.

"*Nov. 29th.* *Saturn*, about 11 P.M. was surveyed some time, but the air was worse than on the 27th. My impressions of the form and position of the shadow of the ball and the encroachment of the latter on the ring, are the same as on that occasion. On the 27th I noticed that the preceding arm of C was brown and the following grey.

"*Dec. 6th.* The division of the ring with power 565 seems quite uninterrupted all round. At the southern part the shadow of the ball comes up to it, and is lost in it; but, indeed, the southern limb of the planet becomes gradually so dark, that at its very edge it cannot be distinguished from shadow; and it is only by completing in imagination the symmetry of the ball in that part that an opinion can be formed, whether it touches the division itself, or whether there is an exceedingly narrow portion of shadow between. The sort of osculation which takes place between the shadow and the division of the ring, or between the dusky limb of the ball and the division of the ring, analogous to the *cornering* of the shadow I observed at Malta, is still plainly visible, but is to me without satisfactory explanation.



"*Dec. 12th.* Similar observations to the above were repeated.

"*Dec. 21st.* Circumstances rather unusually fine. Viewed *Saturn* about 10 P.M. with power 565. There is a very slight cornering of the shadow (?) at the south limb. The extreme south limb of the planet touches, I believe, the division. I cannot see

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